

REMARKS/ARGUMENTS

Reconsideration of this application, in view of the foregoing amendment and the following remarks and arguments, is respectfully requested.

Claims 1-44, 146-229, 236-241, 249-254 and 256-274 are currently pending in this application, and the Examiner's allowance of Claims 1-10, 52-85, 121, 124, 131, 132, 147-149 and 256, and her indication that Claims 12-16, 30, 31, 38-45, 87, 89, 92, 97-101, 108-118, 153, 164, 166, 177, 179, 190, 192-194, 205-207, 218 and 220 contain patentable subject matter, are noted with appreciation.

By the foregoing amendment, Claims 21, 31 and 86 have been revised. Accordingly, Claims 1-44, 146-229, 236-241, 249-254 and 256-274 remain in this application for consideration and allowance.

In her June 10, 2004 Office Action, the Examiner made the following claim rejections and objection which are respectfully traversed for reasons subsequently set forth herein.

1. Claims 11, 17-23, 32, 33, 35, 36, 96, 102-105, 119, 125, 150-152, 154-157, 165, 167-170, 178, 180-183, 257, 259-261, 263, 265, 266, 268-270, 272 and 274 stand rejected under 35 USC §102(e) as being anticipated by U.S. Patent 6,237,693 to Deaton;

2. Claims 24-29, 126, 127, 158-163, 171-176, 184-189, 236-241, 249-254, 262, 264, 271 and 273 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 6,237,693 to Deaton in view of U.S. Patent 6,433,991 to Deaton et al;

3. Claims 34, 258 and 267 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 6,237,693 to Deaton in view of U.S. Patent 6,491,106 to Simonds;

4. Claims 37, 46, 106, 107, 120, 122, 123, 133, 134, 137, 138, 146, 191, 195, 196, 203, 204, 208, 209, 216, 217, 221, 222 and 229 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent 3,731,742 to Sizer et al;

5. Claims 47-51, 86, 90, 91, 128-130, 135, 136, 139-144, 197-202, 210-215 and 223-228 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 3,731,742 to Sizer et al in view of U.S. Patent 6,433,991 to Deaton et al;

6. Claims 88 and 93-95 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 3,731,742 to Sizer et al in view of U.S. Patent 6,433,991 to Deaton et al, further in view of U.S. Patent 6,237,693 to Deaton.

7. Claim 31 is objected to due to insufficient antecedent basis for the limitation "the first and second magnets" in line 2 thereof.

Turning first to matters of form, in the foregoing amendment the dependency of objected-to Claim 31 has been changed from "21" to --30-- to thereby provide specific antecedent basis for the term "first and second magnets" in Claim 31. This is seen to clearly overcome the Examiner's objection to Claim 31. Additionally, a minor typographical error has been corrected in Claim 86.

Turning now to the merits of applicant's claims, independent Claims 11, 96, 152, 165 and 178 each recites, in one manner or another, the displacing of an actuator member, and the translation of actuator member displacement to displacement of an operating member across a **pressure isolation barrier**. In U.S. Patent 6,237,693 to Deaton (see FIGS. 2 and 6B), the displacement of the operating member 24 by the actuating piston structure 36 does not occur across a pressure isolation barrier. Instead, there is a **direct mechanical connection** (i.e., rod 102 as shown in FIG. 6B) between the piston 36 and the flow tube operating member 24.

Independent Claim 21 specifies that the recited first and second pressures (respectively applied to the piston and the operating member) are isolated from one another **without the use of any dynamic seal**. In contrast, in Deaton '693, the first pressure applied to the piston structure

36 is isolated from the second pressure applied to the flow tube operating member 24 by a dynamic seal 53 (see FIG. 3B).

It is thus respectfully submitted that none of applicant's independent Claims 11, 21, 96, 152, 165 and 178, or their dependent Claims 17-20, 22, 23, 32, 33, 35, 36, 102-105, 119, 125, 150-151, 154-157, 167-170, 180-183, 257, 259-261, 263, 265, 266, 268-270, 272 and 274 is anticipated by U.S. Patent 6,237,693 to Deaton.

Via independent Claims 37, 106, 146, 191, 204 and 217, each of applicant's Claims 37, 46, 106, 107, 120, 122, 123, 133, 134, 137, 138, 146, 191, 195, 196, 203, 204, 208, 209, 216, 217, 221, 222 and 229 specifies in one manner or another that the displacement of an actuating member is translated into displacement of an operating member by use of a magnetic coupling. In contrast, the operating member 485 in Sizer et al (see FIG. 15) is electromagnetically translated in response to energization of an actuating member in the form of a **stationary** solenoid coil 440 (i.e., a **non-displaceable** structure). It is thus respectfully submitted that none of applicant's Claims 37, 46, 106, 107, 120, 122, 123, 133, 134, 137, 138, 146, 191, 195, 196, 203, 204, 208, 209, 216, 217, 221, 222 and 229 is anticipated by U.S. Patent 3,731,742 to Sizer et al.

Via independent Claim 21, dependent Claims 24-29, 126 and 127 specify the isolation of recited first and second pressures as discussed above, and via independent Claims 11, 96, 152, 165, 178, 236, 238, 240, 249, 251 and 253, Claims 24-29, 126, 127, 158-163, 171-176, 184-189, 236-241, 249-254, 262, 264, 271 and 273 specify the translation of actuator member displacement to operating member displacement across a pressure barrier as discussed above. U.S. Patent 6,237,693 to Deaton (as set forth previously herein) does not teach or suggest these limitations. These deficiencies in Deaton '693 are in no manner cured by U.S. Patent 6,433,991 to Deaton et al which has been cited by the Examiner solely for its alleged teachings with respect to the use of a solenoid structure to operate various types of

well tools such as packers, choke valves, flapper valves, etc. It is thus respectfully submitted that none of applicant's Claims 24-29, 126, 127, 158-163, 171-176, 184-189, 236-241, 249-254, 262, 264, 271 and 273 is rendered obvious by any combination of U.S. Patent 6,237,693 to Deaton and U.S. Patent 6,433,991 to Deaton et al as proposed by the Examiner.

Dependent Claim 34 recites the isolation of the specified first and second pressures which, as discussed above, Deaton '693 does not teach or suggest. Dependent Claims 258 and 267 recite the translation of actuating member motion to operating member motion across a pressure barrier which Deaton '693 also fails to teach or suggest. U.S. Patent 6,491,106 to Simonds fails to in any manner cure these deficiencies, being cited by the Examiner solely for its alleged teachings with respect to the use of two control lines to control a valve. It is thus respectfully submitted that none of applicant's Claims 34, 258 and 267 is rendered obvious by any combination of U.S. Patent 6,237,693 to Deaton and U.S. Patent 6,491,106 to Simonds.

Claims 47-51, 86, 90, 91, 128-130, 135, 139-144, 197-202, 210-215 and 223-228 all recite, in one manner or another, the use of a **displaceable** actuating member to displace an operating member using a magnetic coupling - a limitation which, as discussed above, U.S. Patent 3,731,742 to Sizer et al fails to teach or suggest. This deficiency in Sizer et al is in no manner cured by U.S. Patent 6,422,991 to Deaton et al which has been cited by the Examiner solely for its alleged teachings with respect to the use of a solenoid structure to operate various types of well tools such as packers, choke valves, flapper valves, etc. It is thus respectfully submitted that none of applicant's Claims 47-51, 86, 90, 91, 128-130, 135, 139-144, 197-202, 210-215 and 223-228 is rendered obvious by any combination of U.S. Patent 3,731,742 to Sizer et al and U.S. Patent 6,422,991 to Deaton et al.

Claims 88 and 93-95 depend from Claim 86 which, for reasons previously discussed herein, are patentable over the Examiner's proposed

combination of the Sizer et al and Deaton et al '991 references. Deaton '693 fails to cure the deficiencies in these references, being cited by the Examiner solely for its alleged teachings with respect to a lack of a dynamic seals (which, indeed, the Deaton '693 apparatus has). Further, none of these three references discloses or suggests the use of a motor to drive the actuating member - a limitation present in each of applicant's Claims 88 and 93-95 via independent Claim 86. It is thus respectfully submitted that none of applicant's Claims 88 and 93-95 is rendered obvious by any combination of the Sizer et al, Deaton et al '991 and Deaton '693 references.


Finally, via their dependency from clearly allowable parent claims, all of the objected-to Claims 12-16, 30, 31, 38-45, 87, 89, 92, 97-101, 108-118, 153, 164, 166, 177, 179, 190, 192-194, 205-207, 218 and 220 are seen to be in a condition for allowance in their present form.

In view of the foregoing amendment, remarks and arguments, all of the claims currently pending in this application are now seen to be in a condition for allowance. A Notice of Allowance of Claims 1-44, 146-229, 236-241, 249-254 and 256-274 is therefore earnestly solicited.

The Examiner is hereby requested to telephone the undersigned attorney of record at 972/516-0030 if such would further or expedite the prosecution of the instant application.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450,

on July 20, 2004
Brian Sutton